

FROM ARTISANAL TRADITIONS TO THE DIGITAL EXPERIENCE: REIMAGINING TEXTILES TRADITIONS THROUGH ARTISTIC CREATION AND IMMERSIVE TECHNOLOGIES

SELMA PEREIRA

ISMAT-Ensino Lusófona,
CICANT - Centre for Research in Applied
Communication, Culture, and New
Technologies
selma.pereira@ismat.pt

ADÉRITO FERNANDES- -MARCOS

University of Saint Joseph, Macao, China,
CIAC- Research Center for Arts and
Communication
INESC TEC - Institute for Systems and
Computer Engineering, Technology and
Science,
LE@D – Laboratory of Distance Education
and eLearning
aderito.marcos@usj.edu.mo

ABSTRACT

This article explores the intersection between traditional textile craftsmanship and digital innovation through the Hands series, a project that integrates tangible and virtual artefacts. Grounded in post-digital aesthetics, *Hands* examines the rematerialisation of textile heritage by combining traditional techniques with immersive technologies such as augmented reality and digital modelling. The project questions the physical and digital dichotomy, proposing new ways of experiencing textile art beyond its material constraints. By incorporating multisensory elements and interactivity, *Hands* redefines the engagement between spectators and artefacts, expanding the narrative potential of textile traditions in contemporary artistic practice. This study critically analyses how post-digital textile aesthetics can serve as a bridge between preservation and innovation, fostering an enriched sensory experience. The discussion highlights the challenges and opportunities of integrating emerging technologies into artistic processes, reinforcing the relevance of sensory engagement in digital art contexts.

Keywords: Post-digital aesthetics; Textile art; Digital rematerialisation; Augmented reality; Artistic interaction.

1. INTRODUCTION

Hands – a homage to textile craft traditions is a series of artistic objects that integrates tangible and virtual artefacts, exploring the intersection between textile craftsmanship and digital innovation. *Hands* take on a central role in the artwork for their expressive and communicative power and their intrinsic connection to traditional knowledge. *Hands* act as a silent invitation to the viewer within these artefacts, capturing their attention through the dynamic nature of printed patterns, the expressiveness of gestures, and the visual composition.

In dialogue with post-digital aesthetics, where the boundaries between tangible and digital become permeable, *Hands* reflects on the impact of the virtualisation of creative processes in traditional arts. This process aims to raise awareness about the urgency of safeguarding intangible heritage without distorting its physical and cultural essence. The artefacts presented here question the relationship between tradition and immersive technology, reimagining gestures and textile patterns characteristic of artisanal practices in the contemporary urban context. By transposing the silence and sounds of traditions into visual and tactile stimuli, *Hands* establishes a sensory connection with the viewer, evoking the symbolism and richness of artisanal creative practices and reaffirming the relevance of sensory experience in the digital environment.

This dialogue between virtualisation and the tangibility of traditional materials aligns with the concept of rematerialisation, in which the digital does not merely replicate but expands and intensifies the physical and cultural presence of the object. Through the interaction between virtual and physical artefacts, the series explores the potential of digital space as both a preservation and innovation agent, promoting the safeguarding of intangible heritage while inviting the viewer to reassess the aesthetics, function, and materiality of objects in their duality between the physical and the virtual.

This article aims to analyse how the *Hands* series reinterprets textile traditions through artistic creation and immersive technologies, questioning the relationship between tradition and innovation in a post-digital context. To achieve this, the study is structured into several sections. The next section provides a theoretical framework, exploring post-digital aesthetics, the concept of rematerialisation, and the relationship between textile art and technology. Subsequently, the creative process behind the *Hands* series is detailed, describing the methodologies adopted, the artefacts developed, and their presentations in different exhibition contexts. Finally, the article concludes with a critical reflection on the implications of this approach for the preservation and reinvention of textile intangible heritage in the digital era.

2. THEORETICAL FRAMEWORK

2.1 POST-DIGITAL AESTHETICS AND REMATERIALISATION IN ART

From the post-digital aesthetics perspective, the rematerialisation of artistic artefacts emerges as a response to the excessive intangibility promoted by contemporary digital artistic practices. The digitisation of art, particularly within digital media art, has historically emphasised immateriality, exploring the potential of code, interactivity, and virtuality as modes of creation and engagement. However, this paradigm has progressively distanced the audience from the sensory and material experience of the artwork, contributing to the dissociation between the artistic object and its physical presence (Paul, 2015) (Fernandes-Marcos, 2017).

In this context, rematerialisation does not represent a rejection of the digital but rather a strategic repositioning of materiality within contemporary artistic practice. It is an attempt to restore the physicality and tangibility of art, using the digital as a medium for amplification and transformation. For authors such as Bishop (2012), the return to materiality in art is not merely a formal concern but an effort to re-centre the sensory experience and tactile interactions often diminished through screen-based mediation. This re-engagement responds to a contemporary need to re-signify the digital by incorporating physical and sensory elements that reinforce the immersiveness and emotional impact of the artwork.

According to Cramer (2015), post-digital aesthetics is characterised precisely by transitioning from a purely digital vision to a hybrid practice in which materiality and the digital coexist dynamically and interdependently. This new paradigm challenges the limitations imposed by digital immateriality and promotes the reintroduction of tactile and physical features in artistic production. Rematerialisation does not simply recover traditional forms of production. Still, it reconfigures the relationship between the digital and the physical, exploring new forms of interaction, textures, volumes, and three-dimensionality that transcend the two-dimensionality of the screen.

Pereira and Fernandes-Marcos (2021) analysed this phenomenon in post-digital artistic creation, focusing on artefacts with a textile or fashion art component. They demonstrated how rematerialisation expands the creation and innovation cycle by fusing traditional techniques and digital technologies. Post-digital fashion, for instance, combines the materiality of fabrics with digital simulation processes, 3D printing, and augmented reality, creating hybrid artefacts that challenge the conventional notion of tangibility. This approach revalues materiality in art and design and expands artists' expressive and experimental possibilities (see Figure 1).



Figure 1. *Nature of a Digital Dream sculpture* (Pereira & Fernandes-Marcos, 2021) (Selma Pereira, *Nature of a Digital Dream*, 2020, source: SelmaEduarda.pt) © Authors.

Rematerialisation is particularly significant in the context of textile art and digital media art, where the relationship between materiality and technology becomes central. As Hansen (2006) argues, technology does not necessarily dematerialise the artistic object; instead, it can intensify its physical presence, transforming it into an expanded artefact. In textile art, this expansion manifests through incorporating textures, patterns, and materials that emphasise the tactile experience, allowing new forms of sensory and emotional engagement with the artwork.

Marks (2002) asserts that touch is fundamental to aesthetic perception, enabling a deeper and more intimate interaction with the artistic object. In the context of rematerialisation, valuing touch and the texture of the fabric is not limited to formal aspects but constitutes an essential dimension of the aesthetic experience. As the audience interacts with the work through touch, they establish a more direct and subjective connection with the materials, evoking memories, emotions, and symbolic associations.

This multisensory dimension is particularly relevant in the post-digital context, where art seeks to overcome the experiential limitations imposed by digital media. Including physical elements such as tangible textures, surface variations, and interactive materials transforms the engagement with the artwork, allowing the spectator to transcend mere visual observation and enter a level of tactile and emotional immersion. As O'Sullivan (2006) suggests, this sensory interaction is not merely

a passive reception process but an active form of engagement that stimulates cognition and affectivity.

Simultaneously, the intangibility of the digital medium expands the possibilities for participation, collaboration, and dissemination of the artwork on social networks, transforming it into a collective and interactive event. Grau (2003) argues that contemporary digital art has increasingly evolved into immersive and interactive experiences in which the audience does not merely observe but actively participates in constructing the artwork's meaning. This engagement is amplified by social networks, which function as platforms for the mediation and circulation of art, enabling spectators to document and share their experiences.

Digital mediation broadens the artwork's reach and transforms it into a shared and dynamic phenomenon. Social networks create a new public sphere for art, where multiple spectators reinterpret and influence the meaning of the work, establishing collective dialogues about aesthetics, materiality, and technology. This democratisation of artistic engagement reinforces the audience's active participation as an essential element of the artwork, expanding its potential through sensory interaction and a broader social dialogue.

In this context, rematerialisation can be seen as a dialectical process that re-signifies the role of the digital in contemporary art. Rather than a mere nostalgic return to physicality, it creates a hybrid space where digital technology and materiality mutually reinforce each other. This process expands the possibilities of artistic experimentation, allowing the digital not only to represent but also to transform and amplify the physical presence of the artwork.

Thus, post-digital art does not merely question the dichotomies between the physical and the virtual but proposes new ways of relating these domains. By integrating materiality and immateriality in a complementary manner, rematerialisation offers the spectator an expanded experience that combines sensory immersion with digital interactivity. This dialogue between tradition and innovation, between tangibility and virtuality, redefines how we experience and understand art in the 21st century.

2.2 TEXTILE ART IN THE POST-DIGITAL CONTEXT

The development of textile art within the landscape of contemporary art is intrinsically linked to post-digital aesthetics, which reconfigures how artworks are created, exhibited, and interacted with by the public. Post-digital artefacts not only challenge the traditional conception of textile art but also prompt a critical reflection on its status as an artistic object. In this context, the relationship between fashion and textile art becomes particularly relevant, as it questions how textile materials are presented in galleries and museums and their interaction with spectators (Fernandes-Marcos, 2022).

Textile art traditionally refers to artistic creations that emphasise textile material as a physical medium. However, the interpretation of the

concept of textiles is ambiguous and multifaceted. According to Catherine Dormor (2020), textiles can simultaneously be understood as a material, a concept, a language, and a metaphor. In *A Philosophy of Textile*, Dormor argues that any reflection on textile art must consider its materiality and expressiveness as matter and the language it generates. Textiles are often associated with feminine universes, the domestic sphere, and artisanal practices, which can obscure their conceptual richness and the plasticity of their artistic use.

For the artist, understanding textile materials goes beyond theoretical knowledge. It is a tactile and experimental process in which handling the material reveals its potential and informs the selection of the most appropriate fibres for each project. This direct interaction with the material is essential to textile artistic creation, enabling a profound engagement with its structural, textural, and expressive qualities. Post-digital textile art objects transcend a purely commercial or marketing approach, positioning themselves as artistic creations that engage with critical thought and sensory experimentation (Openshaw, 2015). Although many of these artefacts have material support—such as textile sculptures and artistic installations—the increasing incorporation of digital technologies has expanded into virtual domains, creating hybrid forms that challenge the tangible and immaterial dichotomy. Digital rematerialisation thus emerges as a process of amplifying materiality, allowing the artwork to be experienced both physically and virtually.

As textile art converges with fashion art, it visually explores textile and wearable materials, presenting itself as an expression of identity and inducing an immersive sensory experience. The multisensory dimension becomes central, stimulating vision, touch, smell, and material handling. This approach contrasts with the passive enjoyment of traditional art, encouraging a more direct and tactile engagement with the artwork. Any analysis of aesthetics or aesthetic discourses within contemporary practices—including post-digital textile art—requires a profound reflection on art and its impact on everyday life. It is vital to distinguish issues related to art itself from aesthetic judgments formulated about artistic objects. In contemporary art, there is a growing need to revisit fundamental aesthetic concepts, such as the immanence of objects, reception and representation, the limitations of sensory apprehension, the role of time and space, and the subjectivity of the observer. Post-digital textile art, particularly, provokes reflection on meaningful experience, aesthetic contemplation, and the interaction between the artefact and the audience.

In seeking a post-digital textile aesthetic, we cannot restrict ourselves to the dynamics of aesthetic capitalism, which frequently transforms artefacts into mass-consumed objects, prioritising ephemeral visual and sensory pleasure stimuli. A post-digital textile aesthetic is closely related to the nature and depth of the experiences that artefacts provide to the public, whether collective or individual.

Based on the observation of various experiences in the field of post-digital textile art, Fernandes-Marcos and Pereira (2022) identified a set of elements that contribute to defining its unique aesthetic:

- The tangibility of textile materials offers diverse haptic perceptions such as texture, temperature, and volume.
- The ephemerality of the digital is reflected in the volatility of virtual components and the constant need for technological updates.
- The wearable dimension of textile art integrates elements of fashion, allowing the artefact to be worn and experienced bodily.
- Physical and/or virtual immersion, as materials and digital media harmoniously integrate to create expanded sensory experiences.
- Co-creation, through active audience interaction, can modify or reinterpret the artefact.
- Learning, as the artwork, stimulates educational processes and the development of new sensory and cognitive skills.
- Playfulness and gamification are present in artefacts that incorporate interactive and ludic elements.
- Sociability and networked experiences are highlighted by the growing integration of textile art into digital platforms and the metaverse.
- Aesthetic contemplation and emotional evocation provide experiences that transcend mere visual appreciation.

The aesthetic of post-digital textile art incorporates elements of an eclectic, plural, and complex contemporary reality, aligning in many aspects with fashion art. According to Lipovetsky (2016), we live in a context of trans-aesthetics, where economic and aesthetic spheres merge into a hyper-art. Post-digital textile art reflects this condition, operating at the intersection of ephemeral sensory experience and technological innovation.

If we analyse post-digital textile art through the lens of fashion art, we identify shared dimensions that reinforce its hybrid status:

- A sociocultural phenomenon, acting as a barometer of contemporary trends.
- Trans-aesthetics, as it articulates sensory experience with the logic of media consumption.
- Ephemerality is due to its digital materiality and the obsolescence of the technologies employed.
- A relationship with the media, incorporating digital visual culture and online dissemination dynamics.
- A performative dimension is present in contemporary textile art presentations and immersive formats.
- Critical potential, functioning as a language of cultural and aesthetic questioning.
- The exploration of desire draws on sensory stimuli that evoke audience engagement.
- Immersion, providing sensory narratives that transcend conventional visuality.
- Active audience participation, encouraging interaction and creative collaboration.

- Touch reinforces the role of haptic experience in artistic appreciation.
- The evocation of memories, connecting the present with artisanal traditions and ancestral knowledge.

Therefore, post-digital textile art's aesthetic is profoundly multidisciplinary, merging technological knowledge with ancestral textile practices. Like post-digital art in general, it seeks to explore the potential of digital rematerialisation to create new forms of multisensory interaction. This process aims to represent reality and expand it, offering new ways of perceiving and questioning the contemporary world.

2.3 MULTISENSORY INTERACTION AND NEW DIGITAL NARRATIVES

The evolution of artistic practices in the post-digital context has challenged the boundaries between different modes of creation and engagement, fostering new forms of sensory interaction and active audience participation. Traditionally centred on visual experience, art is now expanding into tactile, auditory, and immersive dimensions, transforming the relationship between the spectator and the artwork. In this context, multisensory interaction emerges as a fundamental element in constructing digital narratives, serving as a strategy to intensify aesthetic experience and promote deeper audience engagement.

The relationship between aesthetic experience and sensory stimulation has been widely explored across artistic domains. According to Marks (2002), engaging the senses in the perception of art fosters a more intimate connection between the spectator and the artwork, surpassing purely visual enjoyment by incorporating haptic, olfactory, and auditory elements. This concept of haptic visuality suggests that vision can be influenced by other sensory perceptions, promoting a more comprehensive and immersive understanding of the artwork. In the case of post-digital textile art, incorporating textures and tactile materials, combined with the presence of interactive digital components, contributes to constructing an immersive and multisensory environment.

Digital narratives play a crucial role in structuring multisensory interaction, enabling new forms of storytelling and audience participation. The digitisation of art has introduced the possibility of creating dynamic narratives in which users are not merely observers but active agents in shaping the artwork's meaning. According to Grau (2003), contemporary digital art has evolved towards interactive experiences, in which the audience plays an essential role in the reception and transformation of the artwork. Through augmented reality, virtual reality, and responsive technologies, artistic artefacts are becoming increasingly interactive, allowing spectators to influence their configuration and evolution directly.

The *Hands* project manifests multisensory interaction through physical and digital elements, offering spectators an expanded experience. Using fabrics with different textures, patterns, and chromatic

compositions enhances the tactile dimension of the work. At the same time, incorporating digital technology enables new forms of interaction and engagement. Augmented reality, used as an extension of the physical experience, allows the audience to discover additional layers of information and interact with the artefacts in an immersive way. As a narrative component, sound contributes to constructing an engaging atmosphere, evoking the gestures and traditional processes of weaving.

The exploration of sound in post-digital textile art stands out as an element that reinforces sensory experience and bridges tradition and innovation. The *Hands* series incorporates sounds associated with textile manufacturing processes, such as the beating of loom reeds, the tearing of fabric, or the operation of sewing machines. These auditory elements enrich the spectator's experience and establish an emotional and historical connection with artisanal practices. Interaction with sound through augmented reality — allowing each user to activate or combine different auditory elements — transforms the experience into something unique and personal.

Beyond sound and texture, the artwork's spatial dimension also contributes to its multisensory experience. How artefacts are arranged within the exhibition space influences audience perception, fostering bodily engagement and a dialogue between the body and the artwork. Digital interaction sometimes enables the artefacts to transcend physical space, transporting them into virtual environments and extending the audience's experience beyond the exhibition setting.

Social media and digital platforms play a crucial role in disseminating and reinterpreting the digital narratives associated with artworks. The ability to document and share artistic experiences on social media transforms the audience's relationship with the artwork, allowing multisensory interaction to expand into a collective dimension. As Bishop (2012) argues, digital mediation enhances spectator participation, turning them into active contributors to the construction of the artwork and its narrative. In the case of *Hands*, sharing interactions on social media contributes to creating a collaborative digital archive where different perceptions and experiences intertwine and enrich the artwork's meaning.

Thus, multisensory interaction and new digital narratives redefine artistic experience, bridging the tangible and the immaterial, the individual and the collective. The *Hands* project exemplifies this approach by integrating sensory stimuli and interactive technologies, fostering a continuous dialogue between tradition and innovation. Post-digital artistic creation, by prioritising sensory immersion and active audience participation, expands the expressive possibilities of contemporary art, enabling new forms of aesthetic experience that challenge the boundaries between the real and the virtual (Challis, 2014).

3. THE *HANDS* PROJECT AND ARTISTIC EXPERIMENTATION

3.1 CONCEPT OF THE *HANDS* PROJECT

The *Hands – An Homage to Textile Craft Traditions* series is part of a practice-based artistic research project that explores the intersection between tradition and innovation in textile art, adopting a post-digital approach. The project is based on the premise that artisanal traditions, historically transmitted through direct contact and oral communication, can be reinterpreted in the digital environment without losing their cultural and tactile essence. Thus, the series proposes reflecting on the rematerialisation of Portuguese intangible textile heritage, combining physical and virtual elements to expand the spectator's sensory experience.

The central concept of *Hands* is grounded in the relationship between hands and textile patterns, exploring the gestural expressiveness and materiality of fabrics as fundamental elements of cultural identity. *Hands*, beyond representing the act of artisanal creation, function as a visual communication medium, capable of conveying emotions, gestures, and narratives. This body of work is presented in multiple formats—three-dimensionally modelled textile panels, illustrations, or integrated into digital environments—creating a dialogue between presence and absence, touch and visibility, materiality and virtuality.

The series' conception was influenced by post-digital aesthetics, which, according to Cramer (2015), rejects the dichotomy between the physical and the digital and instead proposes a hybrid approach, where both domains coexist and reinforce each other. In textile art, this approach manifests in the fusion of traditional techniques with emerging technologies, mainly through the interaction between textures, patterns, and artisanal gestures with virtualisation processes and augmented reality.

The *Hands* artefacts combine traditional textiles and interactive elements, incorporating references to Portuguese and African textile traditions. Patterns such as Portuguese *chita* and African *capulanas* reflect the cultural interweaving that has shaped Portuguese textile traditions, demonstrating a commitment to cultural diversity and the appreciation of artisanal processes. These materials engage in dialogue with the project's technological component, which is not merely a display support but an integral part of the sensory and narrative experience of the work.

Through augmented reality, the physical dimension of the artefacts is expanded, allowing the audience to activate visual and auditory layers that enrich their perception. For this, the *Adobe Aero* application enables digital interaction with the artefacts and fosters new ways of experiencing and appropriating the artwork. The evolution of the *Hands* series demonstrates its adaptability and growth within the exhibition context.

3.2 DESCRIPTION OF THE ARTEFACTS

Artefact 1:



Figure 2. *Hands Textile Panel*. © Authors.

This panel (Figure 2) comprises 18 hands and arms crafted from white cotton fabric and printed cotton fabric featuring two distinct patterns: one inspired by the traditional Portuguese *chita* and another derived from African *capulanas*, representing the diversity and fusion of global textile practices. Interaction with the work is essential for its full appreciation—spectators are invited to touch the panel, exploring its composition through touch and aligning their hands with those represented in the piece. All panel elements are constructed from flexible textile materials, allowing manipulation without compromising the original structure.

Following its debut in Venice, the artwork continued its exhibition journey. It was presented in 2024 at The House of Smalls Gallery in Edinburgh, the online exhibition *Reflections of the Past, Visions of Tomorrow* at Cista Arts Gallery in London, and in 2025 at the Marginal Art Fair Fukushima Hirono in Japan. This itinerancy reflects the piece's dynamic and adaptable nature, which operates at the intersection of artisanal tradition and technological innovation.



Figure 3. *Hands Artefact 2*. © Authors.

This artefact (Figure 3) comprises 18 hands and arms, featuring nine distinct movements. Each pair of arms has a unique texture made from different materials, primarily textiles, with vibrant and cheerful colours. The artefact is sculpted and presented in 3D to be installed in any virtual exhibition space (or, alternatively, displayed as photographs). It is also available in augmented reality via the *Adobe Aero* application, allowing user interaction and subsequent artwork sharing. In its augmented reality application, the sculpture includes ambient sound and rotating motion. The QR code provided in Figure 4 provides an example of this experience.



Figure 4. QR Code to the Augmented Reality Experience of Artefact 2. © Authors.

The digital format of this artefact enabled its simultaneous participation in geographically distant exhibitions while maintaining its immersive and interactive nature. This includes its display at the ARTeFACTo 2024 conference in Macau at the University of Saint Joseph and the Art on

Loop exhibition, organised by HollyArt Gallery, which took place from 6 to 14 December 2024 in London, UK, and Athens, Greece.

Additionally, in 2024, the artefact was presented at the 48 Stunden Neukölln festival in Berlin and, in 2025, at the Marginal Art Fair Fukushima Hirono in Japan and the exhibition *Fragments of Reality: Art in the Digital Age* at Cista Arts gallery in London.

Artefact 3



Figure 5. *Hands Artefact 3*. © Authors.

The third artefact (Figure 5) consists of eight hands, modelled in 3D, simulating textile materials.

When accessed via the Adobe Aero augmented reality application, this interactive artefact features different effects for each hand. Eight distinct sounds associated with textile traditions and their related activities were selected:

- Three sounds from traditional loom production (the beating of the reed, the passage of the shuttle, and the movement of the pedals).
- Two sounds of fabric tearing.
- Two sounds of sewing machines in operation.
- One sound of felting needles.

In the augmented reality application, these sounds are linked to each corresponding object (each hand) and are activated individually by the user's first touch. A second touch deactivates the sound, allowing the user to combine or listen to multiple sounds individually.

The authors' objective with this interactive element is to encourage the user to explore the artefact, notice intricate details through touch, and

discover the unique materiality and sound of each hand, simultaneously sparking curiosity about textile traditions represented both visually and sonically.

Incorporating sounds and textures into textile art artefacts enriches the spectator's experience, offering a deeper and more immersive sensory interaction. This integration fosters a stronger emotional and cultural connection with the artwork. Moreover, including sound and texture can evoke memories and emotions, making the artistic experience more personal and engaging.

4. THE CREATIVE CYCLE

In the post-digital era, artistic creation no longer resides strictly within the physical or digital domains but in a hybrid space where both coexist and interconnect dynamically. The artistic creation process in this era is characterised by a continuous flow between material and virtual experimentation, in which the boundaries between artisanal techniques and computational technologies are blurred, enabling new forms of aesthetic expression. As proposed by Fernandes-Marcos (2022), this creative cycle is distinguished by the central role of aesthetic mediation and the involvement of multidisciplinary teams, where artists, programmers, designers, engineers, and researchers collaborate to develop works that simultaneously incorporate physical materials and digital elements.

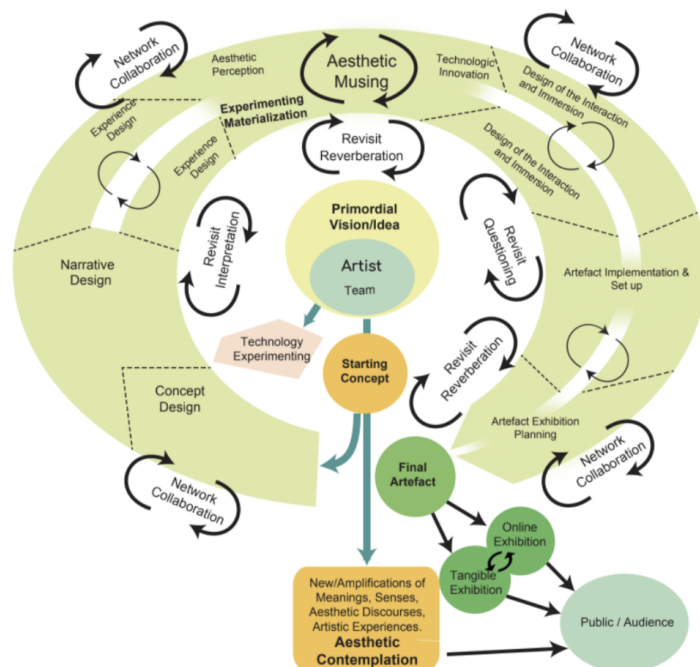


Figure 6. *The Post-Digital Creative Cycle* (Pereira & Fernandes-Marcos, 2020). © Authors.

The post-digital creative cycle does not follow a linear trajectory but rather an iterative process involving multiple layers of reflection, experimentation, and reformulation. Initially, the process begins with concept formulation, where the artist (or creative team) defines the central idea of the work, its aesthetic intentions, and the media to be employed.

This phase is crucial in structuring the project's visual and conceptual narrative and establishing the principles to guide its development.

This is followed by the experience design phase, in which the sensory and interactive possibilities of the artwork are explored. At this stage, the selection of physical materials and digital media that will constitute the artefact and the forms of audience interaction are considered. The spectator's experience is pivotal, as post-digital artwork does not merely invite passive appreciation but encourages active and immersive participation. Aesthetic mediation plays a decisive role here, functioning as a reflective process in which decisions about form, texture, technology, and interactivity are continuously evaluated and adjusted.

The selected materials, forms, and technologies are tested in the next stage, experimentation and prototyping. The artefact's materialisation may involve traditional techniques (such as sculpture, weaving, or printing) and computational processes (such as 3D modelling, interactive programming, or augmented reality). The intersection between the digital and the physical is fundamental at this point, as the goal is not merely to digitise art but to discover new ways of integrating materiality and immateriality into an expanded sensory experience.

After the artefact is constructed, the next step is implementation and adaptation to the exhibition space. This stage is particularly relevant in the post-digital era, as the artwork may be designed for multiple formats and platforms, including physical exhibitions, interactive installations, and virtual environments. The presentation of the work to the public is conceived to optimise its appreciation in both physical and digital contexts, ensuring that the aesthetic experience remains meaningful regardless of the medium in which it is displayed.

The final phase of the post-digital creative cycle is dissemination and exhibition. Unlike traditional art, where the physical exhibition of the work often marks the conclusion of the creative process, the work continues to evolve in the post-digital context through its documentation, sharing, and online interaction. Social media, digital art platforms, and virtual spaces become essential tools for disseminating the work, allowing it to be experienced and reinterpreted by diverse audiences. Additionally, the theoretical production surrounding the creative process and the concepts developed throughout the project become an integral part of the work, contributing to its critical and academic contextualisation.

Thus, the post-digital creative cycle is not limited to producing hybrid artefacts but involves an ongoing process of experimentation, reflection, and adaptation. The interconnection between the physical and the digital, the active participation of the spectator, and aesthetic mediation as a central axis of creation define this approach, which seeks to expand the boundaries of artistic practice and explore new forms of sensory and conceptual interaction.

5. DISCUSSION AND CRITICAL REFLECTION

The *Hands* project aligns with a post-digital artistic context that challenges the boundaries between materiality and virtuality, exploring the relationship between tradition and innovation through digital rematerialisation. The analysis of this project highlights how textile art can be reimagined in the digital age without losing its cultural and sensory roots. However, this approach raises several critical questions regarding the nature of aesthetic experience, audience participation, and the role of technology in creating and appreciating art.

One of the most relevant aspects of this discussion is the concept of rematerialisation in post-digital aesthetics. While the digitisation of art has often led to the dematerialisation of artistic objects, rematerialisation emerges as a process of reintegrating physicality into creative practice. This transition does not imply a nostalgic return to materiality but rather an expansion of contemporary art's expressive possibilities, allowing for new interaction and sensory engagement. In *Hands*, the process of rematerialisation is articulated through the integration of sculptural representations of hands in textured and patterned fabrics, designed to prompt tactile interaction. Viewers are encouraged to physically engage with the piece by touching and repositioning the hands, thus influencing its form. Augmented reality technology adds a further interactive layer, enabling the audience to both engage with and disseminate the resulting experience, thereby establishing a dialogue between the tangible and the immersive.

Interactivity is crucial in this context, fostering a more dynamic relationship between the spectator and the artwork. Contemporary digital media art emphasises active audience participation, transforming artistic appreciation into a collaborative and experiential process. However, interactivity also presents challenges. To what extent can digital immersion replace direct sensory experience? Can the fusion of physical and virtual elements enhance the understanding of textile heritage, or does it risk decontextualising its traditions? These questions are central to the debate on the impact of immersive technologies on textile art.

Another key point in this discussion concerns the relationship between art and cultural identity. The use of traditional patterns in the *Hands* project is an aesthetic approach and an acknowledgement of artisanal practices and their historical significance. As Dormor (2020) highlights, textile art is not just a physical medium but also a field of symbolic meaning where social, political, and cultural narratives intersect. Thus, the digital appropriation of these patterns can be seen as a strategy for preserving intangible heritage but also as a means of questioning its transformations in the context of globalisation and digital culture.

Finally, disseminating the work in virtual environments and on social media raises new questions about democratising access to art. On the one hand, digital technology allows for the expanded visibility of artefacts and access to new audiences. On the other hand, it can lead to a fragmented and superficial reception of aesthetic experience. The

aestheticisation of the contemporary world often reduces art to a fleeting spectacle, where the speed of digital communication compromises the depth of artistic engagement. Thus, the challenge for projects like *Hands* lies in balancing technological innovation with a meaningful aesthetic experience that maintains textile practices' sensory and conceptual richness.

Therefore, the discussion surrounding the *Hands* series is part of a broader debate on the impact of the post-digital era on artistic creation, highlighting both the opportunities and challenges of integrating tradition and innovation. The work reinforces the importance of sensory experience in contemporary art while questioning the dynamics of digital interaction and its influence on the perception of cultural heritage.

6. CONCLUSION

The analysis of the *Hands* series demonstrates how post-digital aesthetics can contribute to the reinterpretation and preservation of artisanal traditions through the fusion of textile techniques and immersive technologies. The project highlights that digital rematerialisation is not merely a return to materiality but a process of expanding sensory experience, where interactivity and audience participation play a central role.

This research confirms that post-digital textile art is not just a field of formal experimentation but also a space for reflection on the relationship between cultural identity, technological innovation, and aesthetic experience. The use of augmented reality and hybrid formats expands the narrative possibilities of the work, enabling artefacts to transcend the limits of the exhibition space and reach new audiences. However, this expansion also presents challenges, particularly concerning preserving the integrity of artisanal practices and maintaining an immersive aesthetic experience.

The discussion presented concludes that the integration of tradition and innovation in the post-digital context should not be seen as a process of substitution but rather as one of complementarity. Digitalisation can enhance textile heritage, provided that it respects the essence of traditional practices and fosters a meaningful sensory experience.

The *Hands* project aims to contribute to the debate on the new possibilities of artistic creation in the digital age, demonstrating that the intersection between the physical and the virtual can generate new forms of enjoyment and interaction with art. The spectator's experience, enriched by the fusion of materiality and digital immersion, reinforces the importance of a multidisciplinary approach that combines aesthetic experimentation with the appreciation of cultural heritage.

This study aims to pave the way for future research on the impact of digital rematerialisation on textile art and the new dynamics of public participation in the contemporary artistic experience. The challenge now lies in the ability to further explore the potential of digital without losing

the sensory richness that defines textile art, ensuring that technological innovation does not dilute but amplifies the essence of artisanal traditions.

ACKNOWLEDGMENTS

We thank CIAC - Center for Research in Arts and Communication (project UIDB/04019/2020); Macau Foundation (projects Conta.Me, MF/2023/ACA/16; Radio.Me, MF/2024/ACA/07); and the ARTECH-International for the support given, which was fundamental to the research that resulted in this article. The artificial intelligence tools *Copilot* and *ChatGPT* were used to prepare this article.

REFERENCES

- Bishop, C. (2012). *Artificial hells: Participatory art and the politics of spectatorship*. Verso.
- Challis, B. (2014). Tactile Interaction. Interaction Design Foundation - IxDF
<https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed/tactile-interaction>
- Cramer, F. (2015). What is 'post-digital'? In D. M. Berry & M. Dieter (Eds.), *Postdigital aesthetics: Art, computation and design* (pp. 12-26). Palgrave Macmillan.
- Dormor, C. (2020). *A philosophy of textile*. Bloomsbury Publishing.
- Fernandes-Marcos, A. (2017). Artefacto computacional: elemento central na prática artística em arte e cultura digital. *Revista Lusófona de Estudos Culturais*, vol. 3(2), 129 – 147.
<http://hdl.handle.net/10400.2/6760>
- Fernandes-Marcos, A., & Pereira, S. (2022). *Post-digital textile aesthetics: A critical reflection on the process of digital re-materialization of artefacts*. In ARTeFACTo – Third International Conference on Digital Creation in Arts, Media and Technology (pp.1-9). Macao.
<https://doi.org/10.1109/ARTEFACTo57448.2022.10061256>
- Fernandes-Marcos, A., Mucheroni, M. L., Pereira, S. (2022). A transdisciplinaridade na média-arte digital enquanto processo de criação-investigação. *Novos Olhares*, 11(2), 1-15.
<https://doi.org/10.11606/issn.2238-7714.no.2022.205267>
- Grau, O. (2003). *Virtual art: From illusion to immersion*. MIT Press.

Hansen, M. B. N. (2006). *Bodies in code: Interfaces with digital media*. Routledge.

Lipovetsky, G. (2016). *Da leveza: Para uma civilização do ligeiro*. Edições 70.

Marks, L. U. (2002). *Touch: Sensuous theory and multisensory media*. University of Minnesota Press.

Openshaw, J. (2015). *Post Digital Artisans: Craftmanshion with a new aesthetic in fashion, art, design and architecture*. Frame Publisher.

O'Sullivan, S. (2006). *Art encounters Deleuze and Guattari: Thought beyond representation*. Palgrave Macmillan.

Paul, C. (2015). *Digital art*. Thames & Hudson.

Pereira, S., & Fernandes-Marcos, A. (2020). *O processo criativo na era pós-digital: Uma reflexão crítica baseada na prática artística*. In *Proceedings of the 2nd International Conference on Transdisciplinary Studies in Arts, Technology and Society (ARTeFACTo)* (pp. 127-135). Macao.

<http://hdl.handle.net/10400.2/10403>

Pereira, S., & Fernandes-Marcos, A. (2021). *Post-digital fashion: The evolution and creation cycle*. *ZoneModa Journal*, 11(1), 71–89.

<https://doi.org/10.6092/issn.2611-0563/13121>

Article received on 09/02/2025 and accepted on 20/04/2025.

Creative Commons Attribution License | This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.